Adaptive Sensor Fusion (ASF)

- Air Force Research Laboratory Fusion Technology Branch Cat 2A Advanced Technology Demonstration to build an open, standards-based architecture for information fusion.

- Plug and Play architecture that provides standard data and application interfaces
  - Publish and subscribe paradigm
  - Evolving ontology based data stream
  - CORBA data transport
  - Adaptive control of fusion processes

- Adaptive Fusion Manager that optimizes performance of the selected confederation of fusion engines
  - Neuro-dynamic control mechanism
  - Fusion Engine MOE/MOP, User Requirements, and Situational Context parameters used for adaptive control
  - Fusion Manager selects fusion engines to use and the control parameters required for the fusion engines

- Encapsulates legacy fusion engines and systems
  - Fusion engines include: NEAT, TEA MICOR, GCCS Correlator, MTI Tracker, ATIF
  - Fusion systems include: GCCS unified build, Constant Vision
  - Interoperability with Stove Pipe Fusion Systems through COPVDF Technology

- ASF meets the following user deficiencies: (ACC: C06, C07; AFSOC; AC2ISRC: ISR-4; AFSPC)
  - Increases Fusion System Interoperability by:
    - Supporting fusion component interoperability through a common mechanism for describing the battlefield
    - Publishing well-defined data and application interfaces
    - Integrating with existing standard tools and provide DII COE compliance
  - Reduce Operator Overload
    - Producing a framework for distributed tasking and control of fusion components
  - Improve Fusion Performance
    - Developing and Adaptive Fusion Controller capable of generating mission and context sensitive tasks and dynamically evaluating and responding to situation changes

- Adaptive Sensor Fusion Technology transition targets include:
  - TBMCS, IBS, A2IPB, GCCS, DCGS, Army Common Ground Station

- Adaptive Sensor Fusion Technology available
  - Yearly spiral releases beginning in April FY00, Final Release 3Q FY02
  - First release of Data and Application API Documentation available now